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ABSTRACT

The basic data requirements for making educational program decisions in an accountability-oriented setting with the school principal as the focal point of the process are detailed in this report. The emphasis is on collecting and disseminating data now available within the school system. These data fall into six categories: school descriptors, student data, data about teachers, data about other staff members, administrator data, and classroom descriptors. Such data, together with a description of the instructional programs, provide the basis for evaluating individual programs and considering alternative programs to achieve a stated objective. With this information readily available, the basis for educational decisionmaking is improved. Also, the administrator who is accountable to the community, can make explicit the rationale for decisions affecting the programs for which he is responsible. (Other reports in this series are available as: LI003908 and LI003910 through 003912). (Author)

VOLUME 2

AN INFORMATION SYSTEM FOR EDUCATIONAL MANAGEMENT: Data Requirements for Accountability

Marjorie Rapp

Prepared for the Los Angeles Unified School District

R-931/LACS
DECEMBER 1971

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Data Requirements for Accountability

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Prepared for the Los Angeles Unified School District

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SANTA MONICA, CA. 90406

PREFACE

In response to community, legislative, and student pressures, school administrators have recently begun to examine the potential of modern management tools and practices. This search for techniques that might function effectively in an educational context led to the adaptation of such methods as program budgeting and accountability. Another tool frequently chosen for educational assistance is the modern management information system, a computer-based aid to planning and decisionmaking.

In late 1970, the Los Angeles Unified School District (LAUSD) contracted with The Rand Corporation to design such an information system in support of educational management. The system is specifically intended to aid planning and decisionmaking (through implementation of accountability and program budgeting) in schools partially supported by Title I provisions of the Elementary and Secondary Education Act.

This report indicates the shape of the accountability system likely to be used in the district and describes the data appropriate for evaluating both program and classroom performance. It is the second in a series of reports describing the research carried out. The other volumes in the series are the following:

- J. A. Farquhar and B. W. Boehm, *An Information System for Educational Management*, Vol. I: *Design Considerations*, R-930-LACS. Defines near-term information system requirements, design guidelines, major design constraints, and information needs of educational decisionmakers.
- T. S. Donaldson, *An Information System for Educational Management*, Vol. III: *Data Requirements for Evaluation: A Review of Educational Research*, R-932-LACS. Reviews and discusses the literature concerning student evaluation, providing direction for eventual information system growth.
- J. A. Farquhar, D. H. Stewart, J. Lombaerde, *An Information System for Educational Management*, Vol. IV: *Functional Design*, R-933-LACS. A functional description of the proposed information system, specifying input and output data, file formats, and necessary processing.

- J. A. Farquhar, I. M. Iwashita, S. H. Landa, *An Information System for Educational Management*, Vol. V: *A Design for Implementation*, R-934-LACS. Describes and discusses alternative hardware, software, and support configurations that might provide the desired services, and the costs and benefits of each.
- L. A. Dougharty and S. A. Haggart, *An Information System for Educational Management*, Vol. VI: *An In-Service Training Program*, R-935-LACS. Describes the education and training requirements for educational administrators charged with effective use of program budgeting, accountability, and the designed information system.

SUMMARY

This report details the basic data requirements for making educational program decisions in an accountability-oriented setting with the school principal as the focal point of the process. The emphasis is on collecting and disseminating data now available within the school system. These data fall into six categories: school descriptors, student data, data about teachers, data about other staff members, administrator data, and classroom descriptors. Such data, together with a description of the instructional programs, provide the basis for evaluating individual programs and considering alternative programs to achieve a stated objective.

With this information readily available, the basis for educational decisionmaking is improved. Also, the administrator who is accountable to the community, can make explicit the rationale for decisions affecting the programs for which he is responsible.

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I. INTRODUCTION

This report attempts to specify the data required for decisionmaking about educational programs. The administrator faced with decisions about which programs should be adopted, which expanded, and which curtailed, needs comparable data about each program under consideration. At a minimum, a detailed description of each program is required, as well as a measure of program effectiveness, a description of the target population, and a specification of the program's resource requirements.

The Los Angeles Unified School District (LAUSD) is moving toward both further decentralization and implementation of an educational accountability system. These simultaneous and related trends, with their consequent information needs, have shaped the design of the evaluation-data specification. In view of these trends, the school principal becomes the logical choice to make decisions about the programs most suitable to the needs of his community; his information needs, therefore, must be given primary consideration. He needs evaluative data about all programs in his school so that he will have a sound basis for making program decisions. He also needs a framework within which to collect and disseminate whatever data may be required by other decisionmakers in the LAUSD.

Section II defines the role of evaluative data and discusses the accountability flow. Section III presents the data requirements to support program evaluation, and Sec. IV illustrates the use of evaluation data in meeting Title I requirements.

II. THE FRAMEWORK FOR EVALUATIVE DATA

In its most general sense, accountability is a concept that gives focus and direction to decisionmaking and requires a systematic delineation of responsibilities *within all organizations*. The key to accountability implementation is an information system that provides rapid, timely feedback to the decisionmaker about the progress being made toward attainment of system objectives. The heart of the information system is the collection, analysis, and dissemination of evaluation data.

Evaluation is a monitoring process that measures outputs of the educational system and systematically relates them to inputs so that the educational administrator can make the necessary decisions about program adoption, expansion, or curtailment.

Decisionmaking capability is improved by the availability of relevant data about the programs under consideration. At the same time, such data provide firm support when decisions are made public. Educational decisionmakers are often suspected of making capricious decisions; the ability to make available for public scrutiny the data on which they base their decisions can help to dispel this image.

THE ACCOUNTABILITY FLOW

The superintendent of a school district is responsible to the Board of Education for the operation of the schools. This implies responsibility for both the allocation of available resources and the educational attainment (a broader concept than achievement) of the students in his system. In a large school system, however, the superintendent cannot be aware of the operating details of each classroom in each school. Accountability, therefore, requires the superintendent to delegate authority and responsibility through the supporting administration to the individual classroom and to provide for feedback from the classroom to the superintendent along the same path. An explicit flow of responsibility, and hence of decisionmaking, is one of several keys to achieving equitable accountability. Each administrator is, ultimately, accountable to the superintendent for accomplishing those responsibilities delegated to him.

For operating purposes, it seems necessary to choose foci for accountability that are large enough to permit sufficient freedom of action for operating purposes and small enough to permit adequate participation in the decisionmaking process. The logical unit around which to center accountability is the school, with the principal as the accountable administrator. Making the principal the focus of accountability is in no way intended to shift the ultimate burden of responsibility from the superintendent. Rather, it is intended as an operational (or managerial) device to improve the system's efficiency.

THE SCHOOL AS THE UNIT FOR ACCOUNTABILITY

The principal, obviously, should be involved in setting the goals for his school if his participation in the decisionmaking process, a basic principle of accountability, is to be achieved. It is unrealistic to expect all schools of a given type to have the same goals since they serve communities with different expectations from, and demands on, the educational system. What is generally accepted as a norm for educational attainment in a white, middle-class neighborhood may be utterly inappropriate, both in terms of level and content, for a school with a large enrollment of students with other backgrounds. Goals and objectives must reflect the expectations of the students, parents, those responsible for providing educational services, and community leaders. As a professional educator, the principal knows what attainment is reasonable under existing operational constraints. He probably also understands the improvement that might be expected with a different mix of resources. In addition, he is attuned to the desires of his community and should be able to translate these into a set of reasonable educational objectives.

FOCUS OF ACCOUNTABILITY

Once the principal has been established as the focus of the accountability system, the following two questions need to be addressed:

- To whom is he accountable?
- For what is he accountable?

He is accountable to the community for his school's progress toward its objectives. He is accountable to the Zone Superintendent. If his is a Title I school, he is accountable to the Director of Specially Funded Programs. He is also accountable to the school staff for procuring the resources with which to implement their program, and just as the principal is accountable to his staff, so the Zone Superintendent is accountable to the principal for supplying needed resources.

Implications of the System

Judicious accountability requires that persons responsible for achieving objectives participate in the decisionmaking process. This means that the principal and his staff must agree on objectives and the means of attaining them, within the following constraints:

- A fixed operating budget.
- District personnel policies.
- The state education code (unless some section is waived for a special program).
- Data requirements of the district and/or state or Federal agencies.

On the other hand, the principal and his staff must have the latitude necessary to carry out the program they design. Basically, this means freedom--within the budget allocated to the school--to specify the resource mix (personnel, equipment, materials) necessary for program implementation. This puts a requirement on the Zone Superintendent (his accountability to the principal) to provide the resource mix so that the principal can pursue his objectives.

PROGRAM EVALUATION

Basically, the data specified in this report all address one issue: improving the educational administrator's ability to make decisions about his programs. If he is to be accountable for his decisions, he must be able to assemble quickly the data on which they were based. Evaluation is the management tool that enables the decisionmaker to measure progress toward stated objectives. By relating outputs of the

educational process to inputs, he can determine what degree of success is achievable by a given resource mix for a defined target population. Such data allow him to make the necessary decisions about the programs for which he is responsible.

Three kinds of program decisions need to be made: adoption, expansion, or curtailment. Program *adoption* deals with the basic question of continuing an ongoing program or changing it. This type of decision often arises because a decisionmaker hears about another program, either in his own district or outside it, that is more successful than one he is currently conducting. In order to make a decision, he needs to know (1) the characteristics of the target population, including their past performance and the performance achieved in the program being considered; (2) the dollar cost of the program; and (3) the resource requirements, in terms of kind and number of personnel, physical facilities, and equipment and materials required. He can then compare these factors with the cost, resource mix, and effectiveness of his own program and decide whether to continue his program or adopt the new one.

There are times when the decision involves *expansion* of a successful program, or *curtailment* of a less successful one. The desire to curtail a program often leads to the decision to adopt a new one. In this case, the decisionmaker is likely to search for a new program. In addition, when considering alternatives, continuing a program should not be overlooked as a decisionmaking option.

III. EVALUATION DATA REQUIREMENTS

Even though the evaluation design is, ultimately, to support accountability and/or program budgeting, it is logical to start by specifying the information that will serve the present systems. Collateral discussion will make it apparent that the very data that are appropriate for use in the present school system will continue to be useful elements of an information system designed with some regard for the demands of accountability and decentralization. In this context, evaluation serves two separate but overlapping purposes: a management function and a research function. This report is concerned with the management function.*

Furthermore, much of this design is intended to provide a description of the educational environment as it exists today so that the decisionmaker has available baseline data against which to measure the impact of changes. Many of the same data serve the whole management hierarchy; the data become increasingly aggregated as they move through the hierarchy from the classroom to the superintendent.

The data considered here are those that were available within the school district at reasonable cost. These data may be of limited utility because of the difficulties inherent in managing educational programs to account for individual differences; however, accurate data correctly used are more useful than no data at all. Until educational research can help identify the interrelationship among teachers and their methods and students and their learning styles, and until these data can be used to improve program planning, the available data must be used to best advantage. In the long run, equitable operation of an accountability system depends on the reliability and appropriateness of the data.

As a management tool, evaluation serves accountability by assessment and identification. That is, it provides data about the current status of the system and identifies for further investigation those

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*T. S. Donaldson, *An Information System for Educational Management*, Vol. III: *Data Requirements for Evaluation: A Review of Educational Research*, The Rand Corporation, R-932-LACS, December 1971, concerns the research function.

aspects of the system that are notable either for lack of success or for unusual success. *Assessment of the current status* is essentially a bookkeeping function--a report on where the school system is with respect to student achievement at some point in time, usually the end of the school year. It is generally made by subject, by grade, and by school, as illustrated in Table 1, which presents reading data for Title I schools. It is possible, by dint of much study, to extract a great deal of information from this kind of report. One can compare the results over time, by grade, and by school. One can also trace a group of students in the same school as they progress through the grades if the data are grouped for this purpose, as in Table 2.

Identification of unsuccessful areas could be greatly simplified by generating an exception report that would present only the data requiring the attention of the decisionmaker. He could specify the criteria for inclusion in the report by defining what scores would be low enough to indicate that a given school's achievement in some grade warranted attention in light of comparable schools' performance. Or he might want reports only for those schools where achievement in a grade was appreciably lower than it had been the previous year. Again, his choice of criteria dictates the boundaries for inclusion.

The same kind of data could be available to the principal of a school. In an elementary school, he should be able to see year-end achievement data by subject, by grade, and by class. The data from any one elementary school are not so cumbersome as to suggest an exception report. At the secondary level, a principal should have year-end data by subject, by grade, and by classroom. He will need to bear in mind that each class represents a more-or-less different mix of students. But he should have an over-view of his school's achievement.

Identification of successful areas entails the same procedures as identifying troublesome areas; where data are numerous, exception reports should be made.

The principal of a school and the administrator of a group of schools or programs, have the same kinds of needs: to be alerted to areas where progress toward a goal is less than anticipated and to be aware of areas where it is greater than anticipated. In either case, they will want to

Table 1

READING SCORES FOR TITLE I SCHOOLS

Stanford Reading Test National Percentiles

(By Grade Levels)

School Code	Grade One				Grade Two				Grade Three		
	1966	1967	1968	1969	1966	1967	1968	1969	1967	1968	1969
103	2	3	5	5	5	3	5	8	9	7	15
106	2	2	3	10	2	7	5	9	5	4	12
107	5	7	6	11	5	5	6	6	18	15	11
116	2	2	5	4	4	4	5	5	1	5	8
120	3	4	3	7	3	4	5	8	3	14	11
126	7	5	6	4	7	7	12	8	6	15	9
127	3	5	9	6	5	5	5	5	7	6	10
128	2	1	6	8	2	2	3	5	4	9	4
132	5	4	3	11	4	5	10	6	8	14	10
141	5	3	4	11	4	5	7	4	3	8	4
191	6	4	4	6	6	5	7	6	9	8	10
195	4	9	7	8	7	6	5	5	10	12	5
196	6	7	3	4	5	6	5	14	4	3	9
202	2	2	6	11	5	4	6	10	2	4	11
226	3	4	4	3	5	4	5	3	8	8	9
239	3	9	11	11	2	5	3	6	3	5	3
247	2	2	4	12	4	3	3	6	4	5	12
249	5	5	6	8	5	4	5	5	6	8	5
261	6	6	23	7	5	11	8	9	12	17	10
264	3	4	4	4	5	5	5	6	21	15	24
268	13	6	16	12	13	20	66	36	23	45	59
269	6	4	7	11	6	6	8	5	15	14	17
271	1	5	6	8	5	5	7	9	13	10	13
272	13	8	7	4	11	13	14	20	25	21	15
273	2	5	9	5	5	6	8	5	17	21	15
274	3	3	7	11	3	5	13	31	13	15	13
277	4	4	8	6	11	11	11	10	9	10	14
278	2	5	7	4	5	5	8	5	17	16	10
282	5	4	5	3	7	5	5	5	8	4	4
303	5	5	8	7	12	7	26	37	15	19	16
304	4	4	5	6	3	5	5	3	6	2	1
307	5	5	5	4	4	6	5	6	6	5	3
310	5	5	13	5	20	12	19	7	15	13	8
312	3	4	5	9	6	2	5	13	13	13	8
322	3	6	22	11	14	8	64	26	24	22	38
331	5	8	12	6	5	6	9	24	9	7	10
332	5	4	10	43	18	22	21	67	19	14	19
334	4	5	13	21	7	8	12	36	15	10	20
336	5	4	2	11	5	5	7	6	4	8	6
338	2	5	9	3	3	5	5	4	8	6	5
Median	4.0	4.5	6.2	7.2	5.1	5.3	6.5	6.4	8.8	9.8	10.2

Table 2

READING SCORES FOR TITLE I SCHOOLS

Stanford Reading Test National Percentiles

(For Same Groups)

School Code	Grade One 1966	Grade Two 1967	Grade Three 1968	Grade One 1967	Grade Two 1968	Grade Three 1969	Grade One 1968	Grade Two 1969	Grade One 1969
103	2	3	7	3	5	15	5	8	5
106	2	7	4	2	5	12	3	9	10
107	5	5	15	7	6	11	6	6	11
116	2	4	5	2	5	8	5	5	4
120	3	4	14	4	5	11	3	8	7
126	7	7	15	5	12	9	6	8	4
127	3	5	6	5	5	10	9	5	6
128	2	2	9	1	3	4	6	5	8
132	5	5	14	4	10	10	3	6	11
141	5	5	8	3	7	4	4	4	11
191	6	5	8	4	7	10	4	6	6
195	4	6	12	9	5	5	7	5	8
196	6	6	3	7	5	9	3	14	4
202	2	4	4	2	6	11	6	10	11
226	3	4	8	4	5	9	4	3	3
239	3	5	5	9	3	3	11	6	11
247	2	3	5	2	3	12	4	6	12
249	5	4	8	5	5	5	6	5	8
261	6	11	17	6	8	10	23	9	7
264	3	5	15	4	5	24	4	6	4
268	13	20	45	6	66	59	16	36	12
269	6	6	14	4	8	17	7	5	11
271	1	5	10	5	7	13	6	9	8
272	13	13	21	8	14	15	7	20	4
273	2	6	21	5	8	15	9	5	5
274	3	5	15	3	13	13	7	31	11
277	4	11	10	4	11	14	8	10	6
278	2	5	16	5	8	10	7	5	4
282	5	5	4	4	5	4	5	5	3
303	5	7	19	5	26	16	8	37	7
304	4	5	2	4	5	1	5	3	6
307	5	6	5	5	5	3	5	6	4
310	5	12	13	5	19	8	13	7	5
312	3	2	13	4	5	8	5	13	9
322	3	8	22	6	64	38	22	26	11
331	5	6	7	8	9	10	12	24	6
332	5	22	14	4	21	19	10	67	43
334	4	8	10	5	12	20	13	36	21
336	5	5	8	4	7	6	2	6	11
338	2	5	6	5	5	5	9	4	3
Median	4.0	5.3	9.8	4.5	6.5	10.2	6.2	6.4	7.2

focus their attention on those areas, rather than disperse it over a large spectrum. They will want to find out why something is working (or not working) in an unusual fashion. If it's extraordinarily good, why? Is it because of a teacher with a new, exciting approach who is providing in-service training for others in his school, or an extremely able administrator whose support encourages teachers to do an outstanding job? If the results were lower than anticipated, the principal or group administrator would still need to determine the cause.

DATA CATEGORIES

Achievement data have been briefly discussed in illustrating the use of evaluation as a management tool. Alone, achievement data tell the decisionmaker almost nothing. Data that describe the total school environment are needed so that the decisionmaker may know what programs work for whom, and what resource mix is required to implement them. He needs data on which to base decisions about program adoption or curtailment. These data requirements have been divided into six categories for discussion: school descriptors, students, teachers, other staff, administrators, and classroom descriptors.

SCHOOL DESCRIPTORS

Because a strong relationship has been established between socio-economic status and achievement, it is necessary to describe the population served by a school. Socio-economic indices should be derived to do this. They need not be complicated, but should reflect the most prevalent salary range, percent of students receiving Aid for Families with Dependent Children, and ethnic composition of the school. Additionally, some indication of the school's mobility rate should be made. If schools are judged by the educational attainment of their students, and a high percentage of them are not in the school for long enough to benefit from its programs, the school cannot be held responsible.

Finally, if it is a Title I school, data specific to Title I evaluation should be collected so that comparability requirements will be met.

Student Data

In the final analysis, it is the educational attainment of the students that determines the school's success in meeting its goals. The word *attainment* rather than achievement is consciously used here because of its broader connotation. The goals of a school are not only to encourage academic achievement, but also to influence many facets of the affective development of the individual. Unfortunately, the state of the art of educational measurement is such that the only area that can be evaluated with any degree of confidence is achievement. Even here, by focussing on gain, the measures are open to serious question. But state guidelines (which are constrained by Federal guidelines) require fall and spring testing of Title 1 participants, so the data must be collected. These are specified in the requirements for Title I evaluation. In general, district-wide or state-wide (at least in California) testing programs specify the administration of a standardized test only once a year, and thus avoid the pitfalls of measuring achievement gain. The current testing program for Los Angeles City Schools is given in Table 3.

Age, grade, and sex for each student should be included. Number and kinds of counseling contacts a student has had, referrals for disciplinary infractions, and attendance data can be used as surrogates for attitude, although this does not mean that the absence of recorded behavioral problems or of disciplinary referrals indicates a good attitude toward school or learning. Lacking reliable measuring instruments, however, we can only suggest that at least those students with demonstrably poor attitudes be identified. Health problems that may be sufficiently disabling to interfere with learning should be noted.

The inclusion of student police contacts in the information system involves a policy decision by the school district. If the decision is to include these data, the question of access to the files may need review. Police contact is simply mentioned for consideration as a possible indicator of student attitude.

A student's teachers need to be identified. In the elementary school with self-contained classrooms this is not much of a problem. In those elementary schools with team teaching in ungraded classrooms,

Table 3

TESTING PROGRAM FOR LOS ANGELES CITY SCHOOLS

Grade	*State Tests*	*District Tests*	*When Given*
K	---	---	---
1	Reading	---	Spring
2	Reading	---	Spring
3	Reading	---	Spring
4	---	Reading-Intelligence	Spring
5	---	---	---
6	Reading-Intelligence	---	November
7	---	Reading-Intelligence	Spring
8	---	---	---
9	Reading-Arithmetic[a]	---	October
10	Reading-Arithmetic[a]	---	Spring
11	Reading-Arithmetic[a]	---	Spring
12	Intelligence	---	November
12	Language	---	November
12	Spelling	---	November
12	Mathematics	---	November
12	Reading	---	November

[a]Not mandated, but to satisfy state requirement.

multiple entries will be required similar to those needed for junior high and high schools in which students have several teachers. But if the classroom is to be the basic unit for assessment of educational attainment, the decisionmaker must know what teaching personnel have been in contact with what students. In the same vein, the programs to which a student is assigned should be noted. This will be dealt with in more detail in the discussion of classroom descriptors.

Teacher Data

It is particularly difficult to specify what information about teachers is sufficiently meaningful to be routinely and systematically collected. The voluminous literature on teacher characteristics has failed to yield guidelines about those attributes of a teacher that are most likely to promote academic attainment for his students. It is

beyond the scope of this report to summarize these findings. They are treated in another report in this series.*

There are, however, two reasons for collecting data related to classroom teachers even though they cannot be related to success in the classroom at present. First, if the data are readily available and if a breakthrough is made in specifying salient background characteristics, it will avoid a crash effort in the future to collect the data and to relate them meaningfully to student's success. Secondly, background data on teachers can be used to good advantage in staff planning.

The need for data on age, sex, and credentials is obvious. Ethnic background, however, may turn out to be an important variable. All other things being equal, is there any evidence that students taught by a teacher of the same race do better (or worse) than students taught by a teacher of a different race? The value of experience as a predictor of teaching success has not yet been demonstrated (nor has the value of education or salary). It may be, however, that certain *aspects* of experience are pertinent. It is suggested, therefore, that experience be subdivided into experience in another district, experience in other schools within the district, and experience in a teacher's current school. In addition, the subjects taught in each of those situations should be noted. The implications of this breakdown for evaluation are as follows: If there are several teachers all with the same length of service, and they achieve quite different results in the classroom, an anomalous situation has to be resolved in trying to relate success to experience. On the other hand, given the same teachers, but knowing that some are new to a school, others are teaching a subject or grade level or kind of student for the first time, while still others are teaching a familiar curriculum for the n^{th} year, it might be possible to identify the *element* in experience that is important to teaching success.

Two other kinds of data that should be available have current applicability to program planning and might ultimately prove useful for program evaluation, namely, information about teachers' interests and

*Ibid.

special abilities. There is no reason to suspect that teachers differ from other professionals in preferring an assignment in their field of interest. A teacher with demonstrated capability in two areas might well be expected to perform better in whichever area he has more interest. In addition, many teachers have special abilities that could be capitalized on in staffing programs, for example, bi-lingualism, workshop experience, training in new teaching techniques, and the like. If these kinds of data were routinely available to the program planner, his staffing problems might be diminished.

The information system facilitates the routine collection of data now that may have a pay-off in the future and the routine collection of data that may be helpful in program planning and implementation.

Other School Staff Data

These data describe the rest of the instructional staff, including special teachers and paraprofessionals, counselors, and where appropriate to program evaluation, data about school nurse and/or physician. The rest of the instructional staff includes special teachers not assigned full-time to the school, such as an English resource teacher or a mathematics specialist. The same information should be available about them as about other teachers. In addition, data regarding the teachers or students they work with and how long they work with them should be recorded, as one basis for assessing the impact of such added resources on a program. Appropriate background data about paraprofessionals should be available also.

Data on full-time counselors, should include at least a minimum of information about their case load as well as the same background data required for teachers. Number of students seen per week is a rough index of the efficiency to be expected. Obviously a counselor cannot do more than a superficial job if he sees too many students. If a vice-principal also acts as counselor, the proportion of his time spent in counseling should be noted.

Perhaps in the long run, it will be necessary to get much more detailed information than this for a complete evaluation of programs. For Example, data about the proportion of time a counselor spends in

programming students; in disciplining students; in vocational, educational, and personal counseling; and in staff and parent conferences will be necessary. These are mentioned now, not because it is currently feasible to accomplish this kind of task, but because it is seen as a very likely requirement in the future.

Where appropriate, data about the school nurse and/or physician will be required. In programs that rely on improving the physical health of a student as a means to improving overall performance, the special services a child receives must be evaluated. Perhaps background data about the nurse and/or physician are secondary to the requirement that records of the frequency and type of service they perform can be readily related to the records of the students for whom they were performed.

Administrator Data

For the principal and vice-principal the same kinds of data as for teachers are required. If effective schools are to be identified so that they can be used as models for less effective schools, the effect of the administrator cannot be overlooked. Here again the literature abounds in references to outstanding administrators but often fails to define their important characteristics. As with teachers, the current state of the art may not be sufficient to describe the attributes of the successful administrator. For evaluative purposes, the use of these data may be beyond the state of the art, but for effective staff planning, these data are required today.

Classroom Descriptors

Without a relatively detailed description of the particular environment in which learning takes place, the educational planner does not have sufficient information about programs to make the necessary decisions relating to their adoption, expansion, or curtailment. The data detailed under the category of classroom descriptors are needed, both to assess current programs and to provide a baseline against which to measure change.

The instructional staff for each classroom should be known--that is, the classroom teacher, any special or resource teachers, and the presence or absence of paraprofessionals. If their identification designators are known, their other characteristics can be described, as outlines in the data requirements for teachers and other instructional staff.

In the self-contained classroom, one set of descriptors will suffice for all the children assigned to it. For any other situation, such as team teaching at the elementary level or departmentalized instruction at the secondary level, each classroom to which a student is assigned will need to be identified and described.

Class size, by room, should be noted. The kind of grouping within the classroom is an important indicator. Whether the group is homogeneous or heterogeneous, the range of ability within the classroom, and in the case of homogeneous groups, whether it is an honors, average, or slow class should be included.

A description of the program is necessary. The first distinction to be made is whether this is a "standard" district program or a special situation. "Standard" means the generally accepted curriculum for a grade, taught by a regularly credentialed teacher. "Special" means any officially recognized deviation from that description--such as an experimental program. The nature of the difference is important--for example, a staffing pattern, a new teaching technique, or a special grouping of children.

In order for the educational planner to know what other resources are being used to achieve educational outcomes, the instructional equipment and supplies used in a program need to be identified. This includes a description of the text books, the audio-visual equipment and other instructional aids, and the required teaching supplies. These data are also currently required in order for districts to address the Title I comparability requirement.

IV. AN EXAMPLE OF THE USE OF EVALUATION DATA

Section III discussed the use of evaluation in an accountability system as a management tool and provided examples of its role in assessing educational achievement and identifying exceptions to expected performance. The focal point of this section is evaluation's usefulness in simultaneously providing the district with information about the progress of its Title I programs and in meeting state and national reporting requirements.

The data specified in the discussion of what the decisionmaker needs to know in order to consider alternative program choices are all germane to making decisions about Title I programs. If those data have been collected and analyzed, they meet the state requirements for Title I reporting. In fact, these data go beyond the requirements in terms of detail about students and programs and provide a better basis for decisions about future operation.

Additional data are required, however, to meet the new comparability requirements. For each Title I school, it is now necessary, because of a 1970 amendment to Title I of the Elementary and Secondary Education Act, to show that services and funds comparable to those in non-Title I schools are being provided *before* the addition of Title I funds. In other words, this is an attempt to ensure that Title I funds are used in addition to, and not as a substitute for, state and local funds. In order to continue receiving Title I funds, local educational agencies will need to demonstrate that their Title I schools have equal or lower personnel ratios and equal or higher expenditures than the average for non-Title I schools serving the same grade level. The Comparability Status Report and the Worksheet developed for California (Figs. 1 and 2) show the data required by each school district in order to demonstrate comparability.

In addition, a special evaluation of Title I projects is required. Figure 3 shows the data requirements for Title I evaluation and summarizes the data necessary for completing the comparability report.

A flexible information system can easily adapt to special reporting requirements such as this. More important, as better measures of

California State Department of Education
Division of Compensatory Education
721 Capitol Mall
Sacramento, California 95814

District_____

Grade Span_____

PART II. COMPARABILITY STATUS REPORT

PUPIL STAFF RATIOS AND PER PUPIL EXPENDITURES
FOR FY 1969-70

	1			2			3			4			5		
	Pupil/ Teacher Ratio			Pupil/Other Certificated Personnel Ratio			Pupil/Non-Certificated Instructional Staff Ratio			Per Pupil Expenditures for Salaries			Per Pupil Expenditures for Other Instructional Costs		
		% Difference	Comparability ? *		% Difference	Comparability ? *		% Difference	Comparability ? *		% Difference	Comparability ? *		% Difference	Comparability ? *
District Average for Non-Title I Schools															
_____ (name) Title I School			Yes No			Yes No			Yes No			Yes No			Yes No
_____ (name) Title I School			Yes No			Yes No			Yes No			Yes No			Yes No

*Ratios and expenditures for each Title I school shall be considered equal to the averages for non-project area schools if they are within five percent.

Fig. 1--California State Department of Education comparability status report

WORKSHEET

CRITERIA FOR DEMONSTRATING COMPARABILITY

School District_____ Grade Span of Schools Listed_____

Title I Project Schools (List Individually)	1 Number of Pupils in ADM	2 Average Number FTE Certified Classroom Teachers	3 Average Number FTE Other Certified Instructional Staff	4 Average Number FTE Non-Certified Instructional Staff	5* Ratio of Pupils to FTE Certified Classroom Teachers (Col. 1 ÷ Col. 2)	6* Ratio of Pupils to FTE Other Certified Instructional Staff (Col. 1 ÷ Col. 3)	7 Ratio of Pupils to FTE Non-Certified Instructional Staff (Col. 1 ÷ Col. 4)	8 Amount Expended for Instructional Salaries (including Longevity)	9 Amount Expended Solely for Longevity	10 Amount Expended for Instructional Salaries Less Longevity (Col. 8 - Col. 9)	11* Per Pupil Expense for Instructional Salaries Less Longevity (Col. 10 ÷ Col. 1)	12 Amount Expended for Other Instructional Costs	13* Per Pupil Expense for Other Instructional Costs (Col. 12 ÷ Col. 1)
Average for Non-Title I Project Schools													

*Criteria upon which the SEA shall base its determination of compliance with the comparability requirement.

Fig. 2--California State Department of Education worksheet

Evaluation

- Component
  - School
  - Grades
    - participants
- Organizational system (Personnel)
- Time allocation
  - Days of instruction
  - Time per day per student
  - Hours of instruction
- Pretest/Posttest data
  - Dates
  - Name of test (form, level)
  - Median grade placement
  - Mean raw scores
  - Number of students taking both

Comparability

- School
  - Number of certified teachers
  - Number of other certified instructional personnel
  - Number of noncertified instructional personnel
  - Instructional salaries [length of service increments]
  - Other instructional costs
    - textbooks
    - library books
    - A.V. materials
- a.d.a.

Fig. 3--Summary of data requirements for Title I reporting and for completing comparability status report

stated objectives are developed they can be incoporated into the system with minimum disruption. If the collection of program data is a routine operation, baseline data is always available against which to compare new programs. For example, when an innovative program is tried, it is not necessary to institute an additional series of tests; the same data are collected for all ongoing district programs. The decisionmaker who has detailed knowledge of the kind outlined in this report is in a better position to implement programs that seem to be working for defined populations and to curtail those that do not hold much promise.